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PATENT
ATTORNEY DOCKET NO.: 46884-5365

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
)
Takashi WATANABE, et al.)
)
Application No.: 10/537,587)
)
Filed: June 6, 2005)
)
For: ALKALI METAL GENERATING)
AGENT, ALKALI METAL)
GENERATING DEVICE, PHOTO-)
CATHODE, SECONDARY-ELECTRON)
EMITTING SURFACE, ELECTRON)
TUBE, METHOD OF PRODUCTION OF)
PHOTO-CATHODE, METHOD OF)
PRODUCTION OF SECONDARY-)
ELECTRON EMITTING SURFACE,)
AND METHOD OF PRODUCTION OF)
ELECTRON TUBE)

Group Art Unit: 3641

Examiner: Unassigned

Commissioner for Patents
U.S. Patent and Trademark Office
Alexandria, VA 22314

Sir:

**SUBMISSION OF INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

Applicants bring to the attention of the Examiner the attached document. To the best of the undersigned's knowledge, this submission is being filed before the mailing date of a first Office Action on the merits for the above-referenced application.

Attached is an English-language translation of an International Preliminary Examination Report ("IPER") dated September 29, 2005 that issued in a counterpart PCT/JP2004/000304 application. Applicants respectfully request that the Examiner consider the IPER as it relates to the above-identified application.

While the IPER cites to two particular documents (JP 55-78438 and JP 48-20944), these documents are not attached hereto because they were previously filed in an Information Disclosure Statement in this application on August 29, 2005.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If it should be determined that any of the listed documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the office the relevant facts and law regarding the appropriate status of such document.

Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

DRINKER, BIDDLE & REATH LLP

Dated: January 25, 2006

By:



Paul A. Fournier

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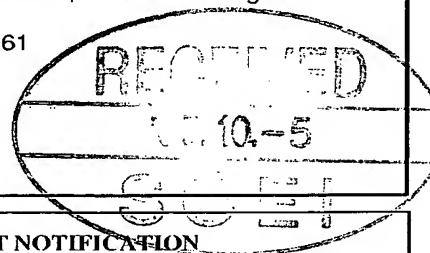
From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

To:

HASEGAWA, Yoshiki
SOEI PATENT AND LAW FIRM, Ginza First Bldg.
10-6, Ginza 1-chome
Chuo-ku, Shizuoka 1040061
JAPON



Date of mailing (day/month/year) 29 September 2005 (29.09.2005)	
Applicant's or agent's file reference FP03-0385-00	IMPORTANT NOTIFICATION
International application No. PCT/JP2004/000304	International filing date (day/month/year) 16 January 2004 (16.01.2004)
Applicant HAMAMATSU PHOTONICS K.K. et al	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Yoshiko Kuwahara
Facsimile No.+41 22 740 14 35	Facsimile No.+41 22 338 90 90

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference FP03-0385-00	FOR FURTHER ACTION	See item 4 below
International application No. PCT/JP2004/000304	International filing date (<i>day/month/year</i>) 16 January 2004 (16.01.2004)	Priority date (<i>day/month/year</i>) 17 January 2003 (17.01.2003)]
International Patent Classification (IPC) or national classification and IPC 7 H01J 9/12		
Applicant HAMAMATSU PHOTONICS K.K.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Date of issuance of this report 16 September 2005 (16.09.2005)
Facsimile No. +41 22 740 14 35	Authorized officer <div style="text-align: center; font-weight: bold; margin-top: 10px;">Yoshiko Kuwahara</div> Telephone No. +41 22 338 90 90

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

Translation

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year)	20-04-2004
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Applicant's or agent's file reference FP03-0385-00	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/JP2004/000304	International filing date (day/month/year) 16-01-2004	Priority date (day/month/year) 17-01-2003
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International Patent Classification (IPC) or both national classification and IPC H01J 9/12
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Applicant HAMAMATSU PHOTONICS K.K.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/000304

Box No. I Basis of the report

1. With regard to the language, this opinion has been established on the basis of:
 - ☐ the international application in the language in which it was filed
 - ☐ the translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rule 12.3(a) and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material
 - ☐ on paper
 - ☐ in electronic form
 - c. time of filing/furnishing
 - ☐ contained in the international application as filed
 - ☐ filed together with the international application in electronic form
 - ☐ furnished subsequently to this Authority for the purposes of search
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/000304

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-13, 25-34	YES
	Claims	14-24	NO
Inventive step (IS)	Claims	1-13, 25-34	YES
	Claims	14-24	NO
Industrial applicability (IA)	Claims	1-34	YES
	Claims		NO

2. Citations and explanations:

Document 1: JP 55-78438 A (Hamamatsu Television Co., Ltd.), 13 June 1980

Document 2: JP 48-20944 B1 (Tokyo Shibaura Electric Co., Ltd.), 25 June 1973

Claims 1-13 and 25-34

Claims 1-13 and 25-34 are novel and involve an inventive step in relation to documents 1 and 2.

Documents 1 and 2 do not disclose or suggest the feature of using vanadate as the oxidizing agent with the alkali metal ions from the alkali metal generating agent for forming the photoelectric surface or the secondary electron emission surface as the counter cations.

Claims 14-20, 23 and 24

Claims 14-20, 23 and 24 lack novelty in the light of document 1.

Document 1 discloses a photoelectric surface and a secondary electron surface which comprise an alkali metal, and discloses a photomultiplier that is equipped with these surfaces. Therein, document 1 indicates that the photoelectric surface and the secondary electron surface are formed from cesium chromate or the like;

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/000304

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

however, it appears to be impossible to differentiate the photoelectric surface and secondary electron emission surface configured from vanadate, which are set forth in claims 14-20, 23 and 24, from the photoelectric surface and secondary electron surface configured from chromate, which are disclosed in document 1, after completion. Therefore, these inventions are the same.

Claims 21 and 22

Claims 21 and 22 do not involve an inventive step in the light of document 1.

The feature of using the photoelectric surface disclosed in document 1 in a well-known imaging tube or streak tube is merely an obvious combination to a person skilled in the art.